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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LI, SHI K

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/742,088

Applicant(s)

MIZUNO, HIROSHI

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2004 and 23 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4, 5 & 10
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites the limitation "which ranks an associated office in an order" in line 5 of the claim. This limitation is not supported by the specification as originally filed. Therefore, the limitation is considered as new matter. The same limitation is recited in lines 5-6 of claim 10 and in line 6 of claim 19.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batey, Jr. et al. (U.S. Patent 6,104,512) in view of Elrod (U.S. Patent 5,528,391) and Ikeda (Japan Patent Application Pub. JP9-172409).

Regarding claims 1, 10 and 18-19, Batey, Jr. et al. discloses in FIG. 4 a one-to-plural bi-directional optical communication system comprising an electronic device and a plurality of secondary devices. Batey, Jr. et al. teaches in FIG. 7 a power management scheme where power

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level is adjusted for each secondary device (equivalent to office of the instant claim) increasing from minimum power until communication is successful. Batey, Jr. et al. teaches in FIGs 5 and 6 a luminous intensity adjusting means for the power management scheme. Batey, Jr. et al. also teaches a packet-based power management scheme in FIG. 13. The differences between Batey, Jr. et al. and the claimed invention are (a) Batey, Jr. et al. does not teach to poll devices sequentially and (b) Batey, Jr. et al. does not teach to start at a maximum intensity and adjust intensity downward. Elrod teaches in col. 3, lines 40-42 that when there are several secondary devices, it is desirable to poll devices serially in order to avoid overlapping packets (i.e., packet collision). One of ordinary skill in the art would have been motivated to combine the teaching of Elrod with the optical communication system of Batey, Jr. et al. because packet collision corrupts packet and prevent secondary devices from sending packets to the main electronic device. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to poll secondary devices serially in order to avoid overlapping packet, as taught by Elrod, in the optical communication system of Batey, Jr. et al.

The modified optical communication system of Batey, Jr. et al. and Elrod still fails to teach to start at a maximum intensity and adjust intensity downward. Ikeda teaches in FIG. 2 an algorithm to adjust intensity starting with a maximum value and adjusting intensity downward (steps 218-223). One of ordinary skill in the art would have been motivated to combine the teaching of Ikeda with the modified optical communication system of Batey, Jr. et al. and Elrod because decreasing from a maximum intensity always gets a positive response, except in the last polling, instead of a failure based on timeout and, therefore, can quickly reach a minimal power level. Thus it would have been obvious to one of ordinary skill in the art at the time the invention

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was made to start with a maximum intensity and decreases intensity until it reaches a optimal value, as taught by Ikeda, in the modified optical communication system of Batey, Jr. et al. and Elrod because decreasing from a maximum intensity gets a positive response instead of a failure based on timeout and, therefore, can quickly reach a minimal power level.

Regarding claims 2 and 11, Batey, Jr. et al. teaches in col. 10, lines 19-39 and step 1306 of FIG. 13 to use bit error rate to determine whether transmission is successful or not.

Regarding claims 3 and 12, Ikeda teaches in step 201 to assign maximum intensity at a time of starting transmission. Ikeda teaches in step 218 to reduce intensity by one level while transmission is performed successfully. Finally Ikeda teaches in step 222 to increase intensity by one step after transmission is not performed successfully and thereby determine in step 224 a minimum required intensity.

Regarding claims 4 and 13, the luminous intensity adjusting means of FIGs 5 or 6 adjusts the drive current to a LED.

Regarding claims 5-6 and 14-15, Batey, Jr. et al. teaches in col. 11, lines 13-19 that the power management method is applicable to any devices that are communicating with infrared, especially portable electronic devices which operate using batteries. This includes host devices and peripheral devices.

Regarding claims 7 and 16, Batey, Jr. et al. teaches in FIG. 13 and col. 10, lines 52 a timeout window to determine whether if a frame can be received or not.

Regarding claims 8-9 and 17, Ikeda teaches in step 218 to reduce intensity by one level while transmission is performed successfully and in step 222 to increase intensity by one step after transmission is not performed successfully and thereby determine in step 224 a minimum

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required intensity. Batey, Jr. et al. teaches in FIG. 13, step 1306 to increase or decrease power level based on the frame content.

Response to Arguments

5. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 703 305-4341. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl


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